REMARKS

By this Amendment claim 1 has been amended to address the examiner's outstanding rejection under 36 U.S.C. 112. Claim 6 has also been amended. Support is found in the description of Fig. 1 in the specification. Entry is requested.

With the outstanding Office Action the examiner has rejected claims 1-4 and 5 under 35 U.S.C. 103(a) as being unpatentable over Jourjine et al. in view of Bell and Killion et al., and he has rejected claim 5 under 35 U.S.C. 103(a) as being unpatentable over Jourjine et al. in view of Preves et al.

However, these rejections must be withdrawn. In this regard, the examiner will find submitted herewith a certified copy of the priority document, European Patent Application 9961002.0, filed 5 January 1999, which filing date is earlier than the effective date of Jourjine et al. Since the priority document fully supports the present U.S. national stage application, Jourjine et al. cannot be used as a reference against this application. The examiner's rejections based thereon must be withdrawn.

The examiner has rejected claims 1-4 and 6 under U.S.C. 103(a) as being unpatentable over Strandberg in view of Kellermann and Killion et al.

The inventor asserts that this rejection is incorrect. In this regard, the inventor asserts that there is no motivation for a person of ordinary skill to combine the teachings of Strandberg with either the teachings of Kellermann or Killion. The Strandberg patent mentions that previous

attempts at suppressing undesirable speech noise have employed multiple microphones and an adaptive array approach, and further that attempts of co-processing the signals acquired by different microphones having different directional characteristics in order to cancel unwanted signals have met with limited success in simple conversational settings but is unable to provide an independent source signal from a single sound source. The fact that Strandberg was aware of the possibility of using microphones having different directional characteristics but did not include this in his independent component approach can be seen as an indication. Otherwise Strandberg would have made use of this to gain further improvement. The Kellermann patent does not regard an independent component analysis process, and even it states that differences in speech to noise ratio in the microphones is utilized, this could not lead a person of ordinary skill to conclude that an ICA (independent component analysis) in a signal processing means could benefit from deliberate differences in directionality of the microphones of the device. The Killion patent would not be combined with the teachings of any of the Kellermann or the Strandberg patents as no adaptive filtering is proposed in Killion. The Killion approach is entirely different from the approaches of Kellermann and Strandberg. The Killion approach relies on a simple switching between different microphone inputs. No adaptive filtration processing is suggested. There is nothing in Killion to suggest that the microphones with different directionality shown here

could be used with any advantage in connection with an advanced independent component analysis at the time of the invention.

The examiner's rejection based on Strandberg in view of Kellermann and Killion et al., should be withdrawn.

The examiner has rejected claim 5 under 35 U.S.C. 103(d) as being unpatentatable over Strandberg in view of Kellermann and Preves et al.

This rejection is without merit. There is no motivation to combine these references. Strandberg possibly shows an ICA system, but the motivation referred to for combining this with Kellermann does not exist. As previously mentioned, Strandberg mentions a system of the kind disclosed by Kellermann, and it is stated that approaches along this line have met with limited success (Strandberg column 2, line 5-12). Thus no motivation is present for combining the teachings of the two references. It is possible that the system according to Kellermann would improve the suppression of noise, however this is not in itself a motivation for combining this with the advanced independent component analysis, as no indications are present in any of the documents that this could result in an improvement.

The Preves reference discloses a simple system for changing the directional characteristic of a hearing aid with two microphones. According to the examiner the motivation for combining this with the Strandberg and Kellermann reference is that such a circuitry would have enabled a polar directivity pattern of the input to be varied from non-directional to super cardioid. That the circuitry according to Preves may

produce such an effect is well possible, but there is no disclosure in either Strandberg or Preves which could lead a person of ordinary skill towards a use of this to enhance the effects of a system adapted to process the signals by means of an independent component analysis.

The examiner's rejection based on Strandberg in view of Kellermann and Preves et al. should be withdrawn.

Favorable reevaluation of this application is requested.

Respectfully submitted,

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